

Name: Answers

Date: _____

1. List the 5 key facts for the Particle Theory of Matter.

unique, moving, attract, small, heat

2. Explain how the Particle Theory of Matter explains why gold and water have different densities.

Something like →

Gold particles and water particles are unique, Gold particles have strong attractions, are close together, move slower, and need more heat to spread out. There are more gold particles in a volume than for water.

3. What is "Archimedes Principle"?

The buoyant force acting on an object equals the weight of the fluid displaced by the object.

4. Define density.

the amount of mass in a certain unit of volume of a substance.

$D = \frac{m}{V}$ - unique to each type of matter
- dif. uses

5. Use a fully labeled drawing to explain why an air balloon rises.

Buoyant force is greater than gravity (note arrows)



Force of Gravity

Buoyant Force

6. Explain how you could determine density of salt water.

Measure mass - use scale
Measure volume - use cylinder
Calculate $m \div V$

note $D = \frac{m}{V}$; remember units